UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/652,144 | 08/29/2003 | Kenneth W. Boyd | TUC920030079US1 | 1176 |

49080 7590 06/20/2007

DALE F. REGELMAN
4231 S. FREMONT AVENUE
TUCSON, AZ 85714

| EXAMINER | |
|---|---|
| WEINTROP, ADAM S | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2145 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 06/20/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/652,144 | BOYD ET AL. | |
| | Examiner | Art Unit | |
| | Adam S. Weintrop | 2145 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *07 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. **Claim 1, 10, and 19** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 11 of U.S. Patent No. 6,047,309. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are obvious variations of each other. Claims 1, 10, and 19 of the current application are directed towards selecting a control node in a network by measuring response times of the other individual nodes, and then designating a control node to coordinate operations of the host computers by using the node that has the minimum aggregate response time of all the nodes. Each node being

in a different host computer, and each node having a communication link to a data storage and retrieval system. In the patent 6,047,309 the claims are directed towards recording response characteristics of the nodes in a network, recording the node data, and then selecting a node to serve information based on the observed response characteristics. The nodes serve data, seen as having a node in a host computer, and store data, seen as having a link to a data storage and retrieval system. By choosing a node, the system coordinates the operations of the other nodes by not interacting with the other nodes. The scope of these claims is similar, however the current application uses aggregate response times and the patent makes use of a recording step to record the response times. It would be obvious to one of ordinary skill in the art at the time of invention to conclude that the application is an obvious variant of the patent as they both designate a node in a network to be considered as the main node by using measured response times.

**Claims 1, 10, and 19** are also rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6,606,643. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are obvious variations of each other. Claims 1, 10, and 19 of the current application are directed towards selecting a control node in a network by measuring response times of the other individual nodes, and then designating a control node to coordinate operations of the host computers by using the node that has the minimum aggregate response time of all the nodes. Each node is in a different host computer, and each node having a communication link to a data storage

and retrieval system. In the patent 6,606,643 the claims are directed towards selecting a mirror server based on response characteristics. The nodes are mirror servers, seen as host computers, and servers serve data, seen as having a communication link to a data storage and retrieval system. By choosing a mirror server, the system coordinates the operations of the other servers by not interacting with the other mirror servers. The scope of these claims is similar, however the current application uses aggregate response time, and the patent does not. It would be obvious to one of ordinary skill in the art at the time of invention to conclude that the application is an obvious variant of the patent as they both designate a node in a network to be considered as the main node by using measured response times.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1, 5, 10, 14, 19, and 23** are rejected under 35 U.S.C. 102(b) as being anticipated by Kenner et al. (US 6,112,239).

Regarding **claim 1**, Kenner et al. discloses a method to select a captain control node from a plurality of interconnected control nodes (column 5, lines 7-12, where the "optimum mirror site" is a captain control node), comprising the steps of:

Supplying a plurality of host computers, wherein a different one of said plurality of control nodes is disposed in each of said plurality of host computers (column 8, lines 7-12, where host computers are "servers" and Figure 1, where the nodes can access each other via the Internet);

Supplying a plurality of data storage and retrieval systems (column 8, lines 7-13, where each node can store data for delivery);

Supplying a communication link interconnecting each of said plurality of host computers and each of said data storage and retrieval systems (column 8, lines 7-12, where "mirror sites" and "data delivery" are data storage and retrieval systems and Figure 1, where the nodes can access each other via the Internet);

Providing by each of said plurality of control nodes a first signal to each of the other control nodes (column 10, lines 11-19, where the use of a ping sends out signals to other nodes on the network);

Receiving by each of said plurality of control nodes, a response signal from each of the other control nodes (column 10, lines 11-19, where the use of a ping receives signals from other nodes on a network);

Calculating by each of said plurality of control nodes individual response times for each of the other control nodes (column 10, lines 11-13, where ping measures response times);

Determining an aggregate response time for each of the plurality of interconnected control nodes (column 18, lines 30-34);

Determining whether to select a captain control node using said aggregate response times (column 11, lines 61-67);

Operative if the captain control node is selected using said aggregate response times: determining the minimum aggregate response time (column 11, lines 61-65, where processing the data to determine a best server inherently would compute the minimum response time); and

Designating the control node having said minimum aggregate response time as the captain control node to coordinate the operations of said plurality of host computers (column 12, lines 41-45, where the best delivery site is determined, and this controls the operations of the other delivery sites based on not having the user interact with the other delivery sites).

Regarding **claim 10**, Kenner et al. discloses an article of manufacture comprising a control node, wherein said host computer is interconnected by a communication link with a plurality of other host computers each comprising a control node (column 8, lines 7-12, where host computers are "servers" and Figure 1, where the nodes can access each other via the Internet), and wherein said host computer is further interconnected by said communication link with a plurality of data storage and retrieval systems (column 8, lines 7-12, where "mirror sites" and "data delivery" are data storage and retrieval systems and Figure 1, where the nodes can access each other via the Internet), said host computer further comprising a computer useable medium having computer readable program code disposed therein to select a captain control node from

said plurality of control nodes (column 5, lines 7-12, where the "optimum mirror site" is a captain control node), the computer readable program code comprising a series of computer readable program steps to effect:

Providing a first signal to each of the other control nodes (column 10, lines 11-19, where the use of a ping sends out signals to other nodes on the network);

Receiving a response signal from each of the other control nodes (column 10, lines 11-19, where the use of a ping receives signals from other nodes on a network);

Calculating individual response times for each of the other control nodes (column 10, lines 11-13, where ping measures response times);

Determining an aggregate response time for said article of manufacture (column 18, lines 30-34, where aggregate performance is analyzed);

Receiving aggregate response times from each of the other control nodes (column 18, lines 30-34, where aggregate performance is analyzed);

Determining whether to select a captain control node using said aggregate response times (column 11, lines 61-67);

Operative if the captain control node is selected using said aggregate response times, determining the minimum aggregate response time (column 11, lines 61-65, where processing the data to determine a best server inherently would compute the minimum response time);

Operative if the captain control node is selected using said aggregate response times, designating a control node having said minimum aggregate response time the captain control node to coordinate the operations of said plurality of host computers (column 12,

lines 41-45, where the best delivery site is determined, and this controls the operations of the other delivery sites based on not having the user interact with the other delivery sites).

Regarding **claim 19**, Kenner et al. discloses a computer program product disposed in host computer comprising a computer readable medium and usable with a computer processor, wherein said host computer is interconnected by a communication link with a plurality of other host computers each comprising a control node (column 8, lines 7-12, where host computers are "servers" and Figure 1, where the nodes can access each other via the Internet), and wherein said host computer is further interconnected by said communication link with a plurality of data storage and retrieval systems (column 8, lines 7-12, where "mirror sites" and "data delivery" are data storage and retrieval systems and Figure 1, where the nodes can access each other via the Internet), said computer program product being usable to select a captain control node from said plurality of control nodes (column 5, lines 7-12, where the "optimum mirror site" is a captain control node), comprising:

Computer readable program code with causes said programmable computer processor to provide a first signal to each of the other control nodes (column 10, lines 11-19, where the use of a ping sends out signals to other nodes on the network);

Computer readable program code with causes said programmable computer processor to receive a response signal from each of the other control nodes (column 10, lines 11-19, where the use of a ping receives signals from other nodes on a network);

Computer readable program code with causes said programmable computer processor to calculate individual response times for each of the other control nodes (column 10, lines 11-13, where ping measures response times);

Computer readable program code with causes said programmable computer processor to determine an aggregate response time for said host computer (column 18, lines 30-34, where aggregate performance is analyzed);

Computer readable program code with causes said programmable computer processor to receive aggregate response times from each of the remaining control nodes (column 18, lines 30-34, where aggregate performance is analyzed);

Computer readable program code with causes said programmable computer processor to determine whether to select a captain control node using said aggregate response times (column 11, lines 61-67);

Computer readable program code which, if the captain control node is selected using said aggregate response times, causes said programmable computer processor to determine the minimum aggregate response time (column 11, lines 61-65, where processing the data to determine a best server inherently would compute the minimum response time);

Computer readable program code which, if the captain control node is selected using said aggregate response times, causes said programmable computer processor to designate the control node having a minimum aggregate response time as said captain control node to coordinate the operations of said plurality of host computers (column 12, lines 41-45, where the best delivery site is determined, and this controls the operations

of the other delivery sites based on not having the user interact with the other delivery sites).

Regarding claims **5, 14, and 23**, Kenner et al. discloses steps that are operative if the captain control node is not selected using said aggregate response times (column 11, lines 61-65, where if a test is not performed, the system still goes on to other tests), providing a captain control node selection function; determining a performance score for each of the plurality of control nodes using said captain control node selection function (column 12, lines 45-47, with the weighting of test equivalent to providing and determining a performance score); designating a control node having a minimum performance score as the captain node (column 12, lines 41-47, where the site is determined based on the results).

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 3 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenner et al. (US 6,112,239) in view of Conrad et al. (US 2002/0156878 A1).

Regarding **claims 3 and 12**, Kenner et al. discloses all of the limitations as described above except for using standard deviation with server response times. The general concept of using standard deviation with network analysis is well known in the art as illustrated by Conrad et al. Conrad provides a way to test network nodes including using standard deviation in column 2, section 19, lines 1-5. It would have been obvious to one of ordinary skill in the art at the time of invention to modify Kenner et al. with using standard deviation results as taught by Conrad et al. in order to fully test the nodes so the best node is selected as to increase system speed.

7. **Claims 2, 11, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenner et al. (US 6,112,239) in view of Rehkopf (US 6,505,249 B1).

Regarding **claims 2, 11, and 20**, Kenner et al. discloses all of the limitations as described above except for repeating the act of determining a response time and a control node if more than one node has the same response time. The general art of repeating tests in order to choose a control node is well known in the art as illustrated by Rehkopf. Rehkopf discloses a system where multiple tests are run on a network with multiple trials and multiple variables. This system can be automated and run multiple times to retest a network component (column 7, lines 3-7). The tests are used for choosing a best network component (column 2, lines 44-45 and lines 32-34). It would have been obvious to one of ordinary skill in the art to modify Kenner et al. with running multiple test to get the best result as taught by Rehkopf in order to increase system speed.

8. **Claims 4, 13, and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenner et al. (US 6,112,239) and Conrad et al. (US 2002/0156878 A1) as applied to claims 3, 12, and 21 above, and further in view of Rehkopf (US 6,505,249 B1).

Regarding **claims 4, 13, and 22**, Kenner et al. and Conrad et al. disclose all of the limitations as described above except for using multiple sets of data to determine the captain control node if the first set of data is not determinate. The general concept of running multiple tests to see what data is valid is well known in the art as illustrated by Rehkopf. Rehkopf discloses a system where multiple tests are run as to determine what network component is functioning the best. The tests are repeated and use different variables (column 6, lines 20-34). The results are returned to the system designer, which is the operator of the test, which can be software according to column 6, lines 61-62. The results are used for determining network conditions and optimizing performance just as choosing a captain control node does (column 6, lines 35-45). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Kenner et al. and Conrad et al. with using other test if a first test has completed without determinate results as taught by Rehkopf in order to increase system speed by choosing the best node.

9. **Claims 6, 15, and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenner et al. (US 6,112,239).

Regarding using the performance score equation as recited in **claims 6, 15, and 24**, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kenner et al.'s equation (column 12, lines 45-47) to include the use

of a performance score in his advantageous system, as using network factors is a common and everyday occurrence throughout the networking art and the specific use of a performance score formula would have been an obvious matter of design preference depending upon such factors as network elements and network size; the ordinarily skilled artisan would choose the best performance equation which would most optimize the cost and performance of the network for a particular application at hand, based upon the above noted common design criteria.

## ***Response to Arguments***

10. Applicant's arguments filed 5/7/07 have been fully considered but they are not persuasive.

### *Summary and Response to Arguments*

A. Applicant has amended the claims to obviate the claim objections.

As to point A, the amendment does obviate the claim objections.

B. Applicant has amended the claims to overcome the rejection under 35 U.S.C. 101 as being non-statutory subject matter.

As to point B, the amendment overcomes the rejection under 35 U.S.C. 101.

C. Applicant has amended the claims to overcome the rejection on the grounds of nonstatutory obviousness-type double patenting for claims 1, 10, and 19.

As to point C, the amendments do not overcome the double patenting rejection, as the amendments added are still rejected as being an obvious variation of the patents Dan et al. and Emens et al.

D. Applicant has amended the claims 1, 10, and 19 to overcome the rejection under 35 U.S.C. 102(b) as being anticipated by Kenner et al. for claims 1, 5, 7-10, 14, 16-19, and 23.

As to point D, the amendments do not overcome the rejection under 35 U.S.C. 102(b) for claims 1, 5, 7-10, 14, 16-19, and 23 as Kenner et al. still anticipates all of the limitations claimed. Applicant has not clearly explained how the claims distinguish over the prior art reference.

E. Applicant argues the rejection under 35 U.S.C. 103(a) for claims 3 and 12 as being unpatentable over Kenner et al. in view of Conrad et al. as either reference, taken alone or in combination, fails to teach every limitations claimed.

As to point E, the amendments to the claims to not overcome the rejection under 35 U.S.C. 103(a) as Kenner et al. and Conrad et al. teach every limitation claimed. The prior art references Kenner et al. and Conrad et al. establish a prima facie case of obviousness.

F. Applicant argues the rejection under 35 U.S.C. 103(a) for claims 2, 11, and 20 as being unpatentable over Kenner et al. in view of Rehkopf et al. as either reference, taken alone or in combination, fails to teach every limitations claimed.

As to point F, the amendments to the claims to not overcome the rejection under 35 U.S.C. 103(a) as Kenner et al. and Rehkopf et al. teach every limitation claimed. The prior art references Kenner et al. and Rehkopf et al. establish a prima facie case of obviousness.

G. Applicant argues the rejection under 35 U.S.C. 103(a) for claims 4, 13, and 22 as being unpatentable over Kenner et al. in view of Conrad et al. and Rehkopf et al. as any reference, taken alone or in combination, fails to teach every limitations claimed.

As to point G, the amendments to the claims to not overcome the rejection under 35 U.S.C. 103(a) as Kenner et al., Conner et al., and Rehkopf et al. teach every limitation claimed. The prior art references Kenner et al., Conner et al., and Rehkopf et al. establish a prima facie case of obviousness.

H. Applicant argues the rejection under 35 U.S.C. 103(a) as being unpatentable over Kenner et al. for claims 6, 15, and 24 as Kenner et al. fails to teach every element claimed.

As to point H, the amendments to the claims do not overcome the rejection under 35 U.S.C. 103(a) as Kenner et al. still teaches all of the limitations claimed. The prior art reference Kenner et al. establishes a prima facie case of obviousness.

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam S. Weintrop whose telephone number is 571-270-1604. The examiner can normally be reached on Monday through Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AW

6/6/07

JASON CARDONE
SUPERVISORY PATENT EXAMINER